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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,056	02/26/2004	Akira Tokai	1083.1102	3288
21171	7590	06/06/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PERRY, ANTHONY T	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/786,056

Applicant(s)

TOKAI ET AL.

Examiner

Anthony T. Perry

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment filed on 3/13/2006, has been entered and acknowledged by the Examiner.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ariga et al. (JP 01-007669).

Regarding claim 1, Ariga et al. disclose a gas-discharge tube, comprising a tubular body (20d) in which a discharge gas is sealed and a plurality of electrodes (21d), for discharging said discharge gas by applying a voltage to each of said plurality of electrodes, wherein a recess portion is formed on an external surface of said tubular body (20d), and at least one electrode among said plurality of electrodes is placed inside said recess portion (See Fig. 5 and abstract).

Regarding claim 5, the recess portion is a trench extending in the axial direction of the tubular body (20d) (See Figs. 5 and 1).

### ***Allowable Subject Matter***

Claims 14-15 are allowed.

Claims 2-4 and 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- An inner surface of a region of said tubular body, where electrodes not being placed in said recess portion among said plurality of electrodes are placed, is formed to have a microscopic unevenness, and a secondary electron emission film is provided at a portion where said microscopic unevenness is formed, in combination with the remaining claimed limitations as called for in claims 2 and 6 (claims 7-8 would be allowable for the same reasons since they are dependent on claim 2);
- The inner surface of the portion of said tubular body, where said recess portion is formed, is formed to have a protrusion portion toward the inside, and a member on which phosphor is arranged is placed at the inner surface of said portion of said tubular body where said protrusion portion is formed toward the inside, in combination with the remaining claimed limitations as called for in claim 3 (claim 4 would be allowable for the same reasons since it is dependent on claim 3);
- A display apparatus in which a plurality of gas-discharge tubes are arranged parallel to each other, and wherein a recess portion is formed on an external surface of the tubular bodies with a first electrode placed in the recess portion of and the inner surface of the portion of said tubular body, where the recess portion is formed, has a protrusion portion toward the inside, and a member on which phosphor is arranged is placed at the inner surface of the portion on the protrusion, in combination with the remaining claimed limitations as called for in claim 14 (claim 15 is allowable for the same reasons since it is dependent on claim 14).

***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure include: Beck (US 4,752,935), Ishimoto et al. (US 6,650,055), Shinoda et al. (US 6,633,117), Parker (US 4,956,577).

***Response to Arguments***

Applicant's arguments filed 3/13/06 have been fully considered but they are not persuasive.

In response to the Applicant's argument that the electrodes in the Ariga reference are not placed inside of the recess portion, the Examiner respectfully disagrees. Figure 5 clearly shows a portion of the electrode (21d) placed inside of the recess portion. The Examiner notes that the entire electrode is not located inside the recess, but that is not what is claimed. The Applicant improperly recites a small excerpt of one of the reasons indicating allowable subject to argue that the Examiner has conceded that the respective claims are allowable because of the feature that the electrode is not located inside of the recess portion.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2879

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (571) 272-2459. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry  
Patent Examiner  
Art Unit 2879  
May 26, 2006



KARABI GUHARAY  
PRIMARY EXAMINER